

## Curriculum Vitae

### **DIANA G. WILKINS, PHD.**

Co- Director, Center for Human Toxicology  
Research Associate Professor, Department of Pharmacology and Toxicology  
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## **EDUCATION**

B.S. Medical Technology, University of Utah,  
M.S. Medical Laboratory Science, University of Utah.  
Thesis: "Analysis of Pap pilin production in uropathogenic E. coli".  
PhD. Health (Research design and statistics emphasis), University of Utah.  
Dissertation: "Establishing a model for the study of growth hormone abuse in two populations of well-conditioned male athletes".

### Clinical Laboratory Internship

Associated Regional and University Pathologists, University of Utah

## **PROFESSIONAL EXPERIENCE**

6/01-present	<b>Co-Director.</b> Center for Human Toxicology, University of Utah. Responsibilities include: direction and supervision of research performed for federal and state grants and contracts; direction of laboratory quality assurance through the quality control manager; supervision of laboratory personnel; grant writing; research; graduate student training.
6/93-6/01	<b>Assistant Director.</b> Center for Human Toxicology, University of Utah. Responsibilities include: direction and supervision of new GC/MS and LC/MS analytical methods development for research grants and contracts; review and certification of analytical data; direction of laboratory quality assurance through the quality control manager; supervision of laboratory personnel; grant writing; research; graduate
1987-6/93	<b>Assistant Toxicologist/Quality Control Manager.</b> Center for Human Toxicology, University of Utah. Responsibilities included: supervision and evaluation of forensic quality control and quality assurance programs for all laboratory

operations; review and certification of analytical data; drug screening and confirmation using RIA, EMIT, TDx, ADx, HPLC, GC (FID, ECD, NPD), GC/MS and LC/MS techniques; development of laboratory standard operating procedure manual in compliance with GLP and DHHS regulations.

1985-1987      **Clinical Microbiologist.**  
Associated University and Regional Pathologists, Inc. (ARUP).  
Responsibilities included: examination interpretation of microbiological cultures; quality control; MIC/MIB studies; bactericidal levels.

## **FACULTY POSITIONS**

6/99-present      Research Associate Professor, Department of Pharmacology and Toxicology, College of Pharmacy, University of Utah.

6/95-6/99      Research Assistant Professor, Department of Pharmacology and Toxicology, College of Pharmacy, University of Utah.

6/92-6/95      Research Instructor, Department of Pharmacology and Toxicology, College of Pharmacy, University of Utah.

## **HONORS**

Irving Sunshine Award for Outstanding Young Investigator, American Academy of Forensic Sciences, 1998.  
New Investigator Regional Award, American Academy of Forensic Sciences, 1996.  
Phi Kappa Phi, University of Utah Chapter.  
California Association of Toxicologists (C.A.T.) Research Scholarship Award 1989-1990.

## **LICENSURE AND CERTIFICATIONS**

Medical Technologist (A.S.C.P.).  
Clinical Laboratory Scientist (N.C.A.).

## **PROFESSIONAL SERVICE**

### NATIONAL

Editorial Board, Journal of Analytical Toxicology (JAT), Jan. 2001-present.  
Executive Board, Society of Forensic Toxicology (SOFT), Oct. 2003-present.  
Board of Directors, Society of Forensic Toxicology (SOFT), Oct. 2000-2003.  
Member, Clinical Chemistry and Clinical Toxicology Devices Panel of the Medical Devices Advisory Committee, Food and Drug Administration (FDA), 2002-present.  
Member, Drug Testing Advisory Board, Substance Abuse and Mental Health Services

Administration (SAMHSA), Department of Health and Human Services, 1993-1997.  
Laboratory Inspector, National Laboratory Certification Program, Substance Abuse and Mental Health Services Administration (SAMHSA), Department of Health and Human Services, 1991-present.  
Member, Special MDCN Review Panel, Center for Scientific Review (NIH- Donald Schneider, SRA). 2000 - 2001.  
Ad Hoc Member, Clinical Chemistry and Clinical Toxicology Devices Panel of the Medical Devices Advisory Committee, Food and Drug Administration (FDA), 2000-2001.  
Ad Hoc Member, Drug Abuse Research Special Review Committee (NIH- James Debass, SRA). 1995-1997.  
Ad Hoc Member, Drug Abuse Biomedical Research Special Review Committee (NIH- Rita Liu, SRA). 1994 – 1997, 2001.  
Member, Special Medications Development Grant Review Committee (NIH-Rita Liu, SRA). 1994-1995.  
Special Reviewer, Office of Technology Assessment (NIDA-Edythe London, Chair). 1994.  
Consultant, Meconium Research Analytical Contract, National Institute on Child Health and Human Development (NICHD), 1993-1994.  
Consultant, Drug-free Workplace Drug Testing Program, Thiokol Corporation, 1992-1995.

#### INTERNATIONAL

Laboratory Assessor, Standards Council of Canada (SCC), 1996-present.  
Ad Hoc Member, Grant Reviews, Canada Foundation for Innovation, 2000.

#### STATE AND REGIONAL

Elected Board Member, State Nominations Committee, Utah Society for Medical Technology (USMT), 1991-1993.  
Member, Committee for State Licensure of Medical Laboratory Personnel, Utah Society for Medical Technology (USMT), 1989-1991.  
Scientific Assembly Chairman, USMT, 1987-1989.  
Region VIII Microbiology Chairman, ASMT, 1987-1989.  
National Medical Laboratory Week Chairman, USMT, 1986.  
State Personnel Relations Chairman, USMT, 1985.

#### UNIVERSITY OF UTAH

Chair, Professional Excellence and Academic Leadership Committee, College of Pharmacy, University of Utah, 1998-present.  
Member, Diversity Committee, University of Utah Standing Committee, 1996-1999  
Chair, Women's Focus Group, College of Pharmacy, University of Utah, 1996-1998.

#### OTHER

Editor, Society of Forensic Toxicology Special Issue, Journal of Analytical Toxicology, October 2000 issue.

## **RESEARCH INTERESTS**

Development of GC/MS and LC/MS Techniques for Analysis of Drugs in Biological Matrices.

Disposition and Metabolism of Drugs and Environmental Toxins In Human Hair and Other Biological Matrices.

Hair as a Biological Marker for Drug Compliance Studies.

Neuropharmacology of Methamphetamine Tolerance.

## **PROFESSIONAL SOCIETIES**

Board Member, Society of Forensic Toxicology, Oct. 2000-present.

Member, The International Association of Forensic Toxicologists (TIAFT), 1991-present.

Member, The American Academy of Forensic Science (AAFS), 1996-present.

Member, Society of Forensic Toxicology (SOFT), 1995-present.

Member, Association for Women in Science (AWIS), 1995-2001.

Member, The American Association of Colleges of Pharmacy (AACP), 1992-2000.

Associate Member, California Association of Toxicologists (CAT), 1988- present.

Member, American Society of Medical Technology (ASMT), 1985-1993.

## **TEACHING RESPONSIBILITIES**

### PRIMARY (Coursemaster)

Pharm/Tox 6680     Statistical Methods for Pharmacologic Research

Pharm Prac 5122     Drug Literature Evaluation I

### TEAM TEACHING

Pharm 538            Clinical Toxicology

Pharm 5211          Pharmacology (pharmacy students)

Pharm 6030          Pharmacology (medical students)

Pharm/Tox 6600     Methods in Pharmacology

Pharm/Tox 6620     Analytical Toxicology

## **SELECTED BIBLIOGRAPHY**

### SELECTED PUBLICATIONS

- White, G., Murdock, R., Richardson, G., and Wilkins, D. "Preventing Growth Hormone Abuse". Health Education, 20: 31-35, 1989.
- Moody, D., Crouch, D., Smith R., Cresalia, C., Francom, P., Wilkins, D., and Rollins, D. "Drug and alcohol involvement in railroad accidents". Journal of Forensic Sciences, 3: 1474-1484, 1991.
- Moody, D., Crouch, D., Andrenyak, D., Wilkins, D., Hoffman, A., and Rollins, D. "Mandatory post-accident drug and alcohol testing for the Federal Railroad Administration: A comparison of results for two consecutive years". NIDA Research Monograph Series No. 100: Drugs in the Workplace: Research and Evaluation Data (II): 79-96, 1991.
- Crouch, D. and Wilkins, D. "Managing the transition to certified laboratory". Medical Laboratory Observer, 23: 58-60, 1991.
- Critchfield, G., Wilkins, D., Loughmiller, D., and Rollins, D. "Toxicologic assay linearity: Non-parametric assessment by bootstrapping". Journal of Analytical Toxicology, 16: 125-131, 1992.
- Critchfield, G., Wilkins, D., Loughmiller, D., and Rollins, D. "Antibody-mediated interference of a homogeneous immunoassay". Journal of Analytical Toxicology, 17: 69-72, 1993.
- Wilkins, D., Rollins, D., Seaman, J., Botts, J., and Foltz, R. "A highly sensitive method for the quantitative analysis of codeine and morphine in human hair by positive chemical ionization mass spectrometry and its clinical applications". NIDA Research Monograph Series No. 141: Problems of Drug Dependence, 1993: Proceedings of the 55th Annual Scientific Meeting (II): 81, 1993.
- Elkins, K., Gibb, J., Hanson, G., Wilkins, D., and Johnson, M. "Effects of nimidopine on the amphetamine- and methamphetamine-induced decrease in tryptophan hydroxylase activity". European Journal of Pharmacology, 250:395-402, 1993.
- Shiono, P., Klebanoff, M., Nugent, R., Cotch, M., Wilkins, D., Rollins, D., Carey, J., and Behrman, R. "The impact of cocaine and marijuana use on low birth weight and pre-term birth: A multicenter study". American Journal of Obstetrics and Gynecology, 172: 19-27, 1995.
- Wilkins, D., Rollins, D., Seaman, J., Haughey, H., Krueger, G., and Foltz, R. "Quantitative determination of codeine and its major metabolites in human hair by gas chromatography/positive chemical ionization mass spectrometry: A clinical application". Journal of Analytical Toxicology, 19 (5): 269-274, 1995.
- Wilkins, D., Haughey, H., Cone, E., Huestis, M., Foltz, R., and Rollins, D. "Quantitative analysis of  $\Delta$ -9-tetrahydrocannabinol, 11-OH- $\Delta$ -9-tetra-hydro-cannabinol and 11-nor-carboxy- $\Delta$ -9-tetrahydrocannabinol in human hair by negative chemical ionization mass spectrometry". Journal of Analytical Toxicology, 19 (6): 483-491, 1995.
- Wilkins, D., Haughey, H., Krueger, G., and Rollins, D. "Disposition of codeine in female human hair after multiple dose administration". Journal of Analytical Toxicology, 19 (6): 492-497, 1995.
- Gygi, S., Wilkins, D., and Rollins, D. "Distribution of codeine and morphine into rat hair after long-term daily dosing with codeine". Journal of Analytical Toxicology, 19 (6): 387-391, 1995.
- Rollins, D., Wilkins, D., and Krueger, G. "Models for studying the cellular processes and

barriers to the incorporation of drugs into hair". NIDA Research Monograph Series No.

154: Membranes and Barriers: Targeted Drug Delivery: 235-244, 1995.

Gygi, S., Colon, F., Raftogianis, R., Galinsky, R., Wilkins, D., and Rollins, D. "Dose-related distribution of codeine and its metabolites into rat hair". *Drug Metabolism and Disposition*, 24 (3): 282-287, 1996.

Ggyi, S., Joseph, R., Cone, E., Wilkins, D., and Rollins, D. "Incorporation of codeine and metabolites into hair. Role of pigmentation". *Drug Metabolism and Disposition*, 24(4): 495-501, 1996.

Rollins, D., Wilkins, D. and Krueger, G. "Disposition of codeine in human hair after single and multiple doses", *European Journal of Clinical Pharmacology*, 50: 391-397, 1996.

Krueger, G., Pitcher, C., Liimatta, A., Knapp, T., Miller, K., Wilkins, D., and Rollins, D. "Insights into the passive uptake of xenobiotics, amino acids and codeine into human hair". *Journal of Cutaneous Medicine and Surgery*, 1(2): 66-73, 1996.

Hold, K., Wilkins, D., Crouch, D., and Rollins, D. "Detection of stanozolol in hair by negative ion chemical ionization mass spectrometry". *Journal of Analytical Toxicology*, 20(6): 345-349, 1996.

Slawson, M., Wilkins, D., and Rollins, D. "Quantitative determination of phencyclidine in pigmented and nonpigmented hair by ion trap mass spectrometry". *Journal of Analytical Toxicology*, 20(6): 350-354, 1996.

Wilkins, D., Nagasawa, P., Gygi, S., Foltz, R., and Rollins, D. "Quantitative analysis of methadone and two major metabolites in hair by positive chemical ionization ion trap mass spectrometry". *Journal of Analytical Toxicology*, 20(6): 355-361, 1996.

Gygi, M., Gygi, S., Johnson, M., Wilkins, D., Gibb, J., and Hanson, G. "Mechanisms for tolerance to methamphetamine effects". *Neuropharmacology*, 35 (6): 751-757, 1996.

Hold, K., Crouch, D., Rollins, D., Wilkins, D., Canfield, D., and Maes, R.

"Quantitation of alprazolam and alpha-hydroxyalprazolam in human plasma by negative

ion chemical ionization GC/MS". *Journal of Mass Spectrometry*, 31:1033-1038, 1996.

Rollins, D. Wilkins, D., Gygi, S., Slawson, M., and Nagasawa, P. "Testing for drugs of abuse in hair: Experimental observations and indications for future research". *Forensic Science Review*, 9 (1): 24-36, 1997.

Hold, K., Crouch, D., Wilkins, D., Rollins, D., and Maes, R. "Detection of alprazolam in hair by negative-ion chemical ionization mass spectrometry". *Forensic Science International*, 84 (1): 201-209, 1997.

Gygi, S., Wilkins, D., and Rollins, D. "A comparison of phenobarbital and codeine incorporation into pigmented and non-pigmented rat hair". *Journal of Pharmaceutical Sciences*, 86(2): 209-214, 1997.

Fleckenstein, A., Beyeler, M., Jackson, J., Wilkins, D., Gibb, J., and Hanson, G.

"Methamphetamine-induced decrease in tryptophan hydroxylase activity: Role of 5-HT transporters". *European Journal of Pharmacology*, 324: 179-186, 1997.

Fleckenstein, A., Metzger, R., Wilkins, D., Gibb, J., and Hanson, G. "Rapid and reversible effects of methamphetamine on dopamine transporters". *Journal of Pharmacology and Experimental Therapeutics*, 282:834-838, 1997.

Goldberger, B., Huestis, M., and Wilkins, D. "Commonly practiced quality control and quality assurance procedures for gas chromatography/mass spectrometry analysis in

forensic urine drug testing laboratories". *Forensic Science Review*, 9(2): 60-80, 1997.

Wilkins, D., Valdez, A., Krueger, G., and Rollins, D. "Quantitative analysis of l-alpha-acetylmethadol, l-alpha-acetyl-N-normethadol and l-alpha-acetyl-N,N-dinormethadol in human hair by positive-ion chemical ionization mass spectrometry". *Journal of Analytical Toxicology*, 21: 420-426, 1997.

Fleckenstein, A., Wilkins, D., Gibb, J., and Hanson, G. "Interaction between free radical formation and hyperthermia in the serotonergic response to a single methamphetamine administration". *Journal of Pharmacology and Experimental Therapeutics*, 283(10): 281-285, 1997.

Klebanoff, M., Levine, R., DerSimonian, R., Clemens, J., and Wilkins, D. "Serum caffeine and paraxanthine as markers for reported caffeine intake in pregnancy". *Annals of Epidemiology*, 8: 1-7-111, 1998.

Klebanoff, M., Levine, R., Clemens, J., DerSimonian, R., and Wilkins, D. "Serum cotinine concentration and self-reported smoking during pregnancy". *American Journal of Epidemiology*, 148(3): 259-262, 1998.

Wilkins, D., Valdez, A., Nagasawa, P., Gygi, S., and Rollins, D. "Incorporation of drugs for the treatment of substance abuse into pigmented and nonpigmented hair". *Journal of Pharmaceutical Sciences*, 87(4): 435-440, 1998.

Kokoshka, J., Metzger, R., Wilkins, D., Gibb, J., Hanson, G., and Fleckenstein, A. "Methamphetamine treatment rapidly inhibits serotonin, but not glutamate, transporters in rat brain". *Brain Research*, 799(1): 78-83, 1998.

Hold, K., Hubbard, D., Wilkins, D., and Rollins, D. "Quantitation of cocaine in human hair: the effect of centrifugation of hair digests". *Journal of Analytical Toxicology*, 22: 414-417, 1998.

Slawson, M., Wilkins, D., and Rollins, D. "The incorporation of drugs into hair: relationship of hair color and melanin concentration to phencyclidine incorporation". *Journal of Analytical Toxicology*, 22: 414-417, 1998.

Hold, K., Wilkins, D., Rollins, D., Joseph, R. and Cone, E. "Simultaneous quantitation of cocaine, opiates and metabolites in human hair by positive chemical ionization GC/MS". *Journal of Chromatographic Science*, 36: 125-130, 1998.

Hold, K., Borges, C., Wilkins, D., Rollins, D., and Joseph, R. "Detection of nandrolone, testosterone and their esters in rat and human hair samples". *Journal of Analytical Toxicology*, 23: 416-423, 1999.

Joseph, T., Hold, K., Wilkins, D., Rollins, D., and Cone, J. "Drug testing with alternative matrices II. Mechanisms of cocaine and codeine disposition in hair". *Journal of Analytical Toxicology*, 23: 396-408, 1999.

Wilkins, D., Rollins, D., Valdez, A., Mizuno, A., Krueger, G., and Cone, J. "A retrospective study of buprenorphine and norbuprenorphine in human hair after multiple doses". *Journal of Analytical Toxicology*, 23: 409-415, 1999.

Klebanoff, M., Levine, R., DerSimonian, R., Clemens, J. and Wilkins, D. "Maternal serum paraxanthine, a caffeine metabolite, and the risk of spontaneous abortion". *New England Journal of Medicine*, 341: 1639-1689, 1999.

Haughey, H.M., Brown, J.B., Wilkins, D.G., Hanson, G.R. and Fleckenstein, A.E. "Differential effects of methamphetamine on Na<sup>+</sup>/Cl<sup>-</sup>-dependent transporters". *Brain*

- Research, 863:59-63, 2000.
- Metzger, R.R., Haughey, H.M., Wilkins, D.G., Gibb, J.W., Hanson, G.R. and Fleckenstein, A.E. "Methamphetamine-induced rapid decrease in dopamine transporter function: Role of dopamine and hyperthermia". *Journal of Pharmacology and Experimental Therapeutics*, 295:1077-85, 2000.
- Kokoshka, J.M., Fleckenstein, A.E., Wilkins, D.G. and Hanson, G.R., 2000. "Age-dependent differential responses of monoaminergic systems to high doses of methamphetamine". *Journal of Neurochemistry*, 75:2095-2102, 2000.
- Hubbard, D., Wilkins, D., and Rollins, D. "The incorporation of cocaine and metabolites into hair: Effects of dose and hair pigmentation". *Drug Metabolism and Disposition*, 28:1464-1469, 2000.
- Borges, C., Roberts, J., Wilkins, D. and Rollins, D. "Relationship of melanin degradation products to actual melanin content". *Analytical Biochemistry*, 290:116-125, 2001.
- Johnson, R., Jones, J., Jasinski, D., Svikis, D., Haug, N., Jansson, L., Kissin, W., Alpan, G., Lantz, M., Cone, E., Wilkins, D., Golden, A., Huggins, G. and Lester, B. "Buprenorphine treatment of pregnant opioid-dependent women: maternal and neonatal outcomes". *Drug and Alcohol Dependence*, 63(1): 97-103, 2001.
- Klebanoff, M., Levine, R., Morris, C., Hauth, J., Sibai, B., Curet, L., Catalano, P., and Wilkins, D. "Accuracy of self-reported cigarette smoking among pregnant women in the 1990's". *Pediatric and Perinatal Epidemiology*, 15: 140-143, 2001.
- Borges, C. Wilkins, D. and Rollins, D. "Amphetamine and N-acetylamphetamine incorporation into hair: An investigation of the potential role of drug basicity in hair color bias". *Journal of Analytical Toxicology*, 25: 221-227, 2001.
- Paulsen, R., Wilkins, D., Slawson, M., Shaw, K. and Rollins, D. "Effects of four laboratory decontamination procedures on the quantitative determination of cocaine and metabolites into hair". *Journal of Analytical Toxicology*, 25: 490-496, 2001.
- Riddle, E., Kokoshka, J., Wilkins, D., Hanson, G., and Fleckenstein, A. "Tolerance to the neurotoxic effects of methamphetamine in young rats". *European Journal of Pharmacology*, 453(2): 181-185, 2002.
- Savitz, D., Henderson, L., Dole, N., Herring, A., Wilkins, D., Rollins, D. and Thorp Jr., J. "Indicators of cocaine exposure and preterm birth". *Obstetrics and Gynecology*, 99: 458-465, 2002.
- Borges, C., Martin, S., Meyer, L. Wilkins, D. and Rollins, D. "Influx and efflux of amphetamine and N-acetylamphetamine in keratinocytes, pigmented melanocytes, and non-pigmented melanocytes". *Journal of Pharmaceutical Sciences*, 91(6): 1523-1535, 2002.
- Klebanoff, M., Levine, R., Clemens, J. and Wilkins, D. "Maternal serum caffeine metabolites and small-for-gestational-age birth". *American Journal of Epidemiology*, 155: 32-37, 2002.
- Wilkins, D., Mizuno, A. Borges, C., Slawson, M., and Rollins, D. "Ofloxacin as a reference marker in hair of various colors". *Journal of Analytical Toxicology*, 27: 125-134, 2003.
- Borges, C., Roberts, J., Wilkins, D. Rollins, D. "Cocaine, benzoylecgonine, amphetamine, and N-acetylamphetamine binding to melanin subtypes". *Journal of Analytical Toxicology*, 27: 149-155, 2003.



Wilkins, D., Rollins, D., Krueger, G., Augsburger, M., Mizuno, A., O'Neal, C., Borges, C. and Slawson, M. "The effect of hair color on the incorporation of codeine into human hair". *Journal of Analytical Toxicology*, 28: May 2003 (In Press).

Day, J., Slawson, M., Lugo, R. and Wilkins, D. "Analysis of fentanyl and norfentanyl in human plasma by liquid chromatography-tandem mass spectrometry using electrospray ionization". Accepted by the *Journal of Analytical Toxicology*, April 14, 2003.

Charles, B., Day, J., Rollins, D. and Wilkins, D. "Opiate recidivism in a drug treatment program: Comparison of hair and urine data". Accepted by the *Journal of Analytical Toxicology*, April 21, 2003.

### SELECTED ABSTRACTS

Wilkins, D., Crouch, D., and Rollins, D. "Analysis of phenylpropanolamine by positive chemical ionization mass spectrometry". Abstract presented at the American Academy of Forensic Annual Meeting, 1989, Las Vegas, NV.

Krueger, G., Knapp, T., Limatta, A., Jorgensen, C., Wiley, S., Wilkins, D., Rollins, D., Miller, K., Dingman, D., and Petersen, J. "Incorporation of environmental agents or drugs into hair using 35S-cysteine as a simulant *in vitro* and *in vivo*". Abstract presented at the Society for Investigative Dermatology Annual Meeting, April 1993.

Wilkins, D., Rollins, D., Krueger, G., and Foltz, R. "Disposition of codeine in human hair following single and multiple doses". Oral presentation at the College on Problems of Drug Dependence Annual Meeting, June 1994, Palm Beach, FL.

Gygi, S., Wilkins, D., and Rollins, D. "Distribution of codeine and morphine into rat hair after chronic daily dosing with codeine". Abstract presented at the College on Problems of Drug Dependence Annual Meeting, June 1994, Palm Beach, FL.

Gibb, J., Hanson, G., Wilkins, D., and Johnson, M. "Effects of probenecid on the methamphetamine-induced decrease in tryptophan hydroxylase activity". Abstract presented at the College on Problems of Drug Dependence Annual Meeting, June 1994, Palm Beach, FL.

Gygi, M., Gygi, S., Wilkins, D., Gibb, J., and Hanson, G. "Mechanisms involved in methamphetamine-induced tolerance". Abstract presented at the College on Problems of Drug Dependence Annual Meeting, June 1994, Palm Beach, FL.

Wilkins, D., Gygi, S., Haughey, H., and Rollins, D. "Hair: A potential biomarker for drug and chemical exposure". Abstract presented at the North American Congress of Clinical Toxicology, September 1994, Salt Lake City, UT.

Gygi, S., Wilkins, D., and Rollins, D. "An animal model for drug and xenobiotic incorporation in hair". Abstract presented at the North American Congress of Clinical Toxicology, September 1994, Salt Lake City, UT.

Rollins, D., Wilkins, D., Foltz, R., Haughey, H., Gygi, S., and Krueger, G. "Disposition of codeine in hair". Abstract presented at the Conference on Drug Testing in Hair, Society of Forensic Toxicology and DHHS, October 1994, Tampa, FL.

Wilkins, D., Rollins, D., Haughey, H., and Foltz, R. "Analysis of drugs of abuse in hair by positive chemical ionization ion trap mass spectrometry". Abstract presented at the Conference on Drug Testing in Hair, Society of Forensic Toxicology and DHHS, October 1994, Tampa, FL.

- Gygi, S., Colon, F., Galinsky, R., Wilkins, D., and Rollins, D. "Distribution of xenobiotics into hair as a biomarker of exposure". Abstract presented at the Society of Toxicology Annual Meeting, March 1995.
- Slawson, M., Gygi, S., Wilkins, D., and Rollins, D. "The incorporation of xenobiotics and polar metabolites into dark and light colored hair". Abstract presented at the Society of Toxicology Annual Meeting, March 1995.
- Gygi, S., Wilkins, D., and Rollins, D. "Hair pigmentation as an important factor in drug incorporation into hair". Abstract presented at the College on Problems of Drug Dependence Annual Meeting, June 1995, Scottsdale, AZ.
- Haughey, H., Wilkins, D., and Rollins, D. "A GC/MS method for the quantitation of tetrahydrocannabinol and metabolites in human hair". Abstract presented at the College on Problems of Drug Dependence Annual Meeting, June 1995, Scottsdale, AZ.
- Rollins, D., Wilkins, D., and Krueger, G. "Human hair transplanted to athymic mice as a model of drug incorporation". Abstract presented at the College on Problems of Drug Dependence Annual Meeting, June 1995, Scottsdale, AZ.
- Wilkins, D., Rollins, D., and Krueger, G. "Disposition of codeine into male vs. female hair after multiple doses". Abstract presented at the College on Problems of Drug Dependence Annual Meeting, June 1995, Scottsdale, AZ.
- Slawson, M., Wilkins, D., and Rollins, D. "Phencyclidine as a model compound for studying mechanisms of xenobiotic incorporation into hair". Abstract presented at the Mountain West Society of Toxicology Annual Meeting, October 1995.
- Hold, K., Crouch, D., Wilkins, D., Rollins, D., and Canfield, D. "Quantitation of alprazolam and alpha-hydroxyalprazolam in human plasma and rat hair by negative ion chemical ionization GC/MS". Abstract presented at the Society of Forensic Toxicology Annual Meeting, October 1995, Baltimore, MD.
- Joseph, R., Su, T-P., Cone, E., Gygi, S., Wilkins, D., and Rollins, D. "Comparison of *in vitro* and *in vivo* binding of morphine and codeine to rat hair". Abstract presented at the Society of Forensic Toxicology Annual Meeting, October 1995, Baltimore, MD.
- Laycock, J., Spanbauer, A., Crouch, D., Wilkins, D., Moody, D., and Foltz, R. "LC/MS/MS of buprenorphine and norbuprenorphine in human plasma and hair". Abstract presented at the American Society for Mass Spectrometry Annual Meeting, May 1996.
- Slawson, M., Wilkins, D., and Rollins, D. "Mechanism of PCP binding in hair". Abstract presented at the College on Problems of Drug Dependence Annual Meeting, June 1996, San Juan, Puerto Rico.
- Haughey, H., Wilkins, D., and Rollins, D. "Effect of laboratory decontamination procedures on quantitative determination of THC in human hair". Abstract presented at the College on Problems of Drug Dependence Annual Meeting, June 1996, San Juan, Puerto Rico.
- Hold, K., Wilkins, D., Rollins, D., and Maes, R. "Measurement of anabolic steroids in hair". Abstract presented at the College on Problems of Drug Dependence Annual Meeting, June 1996, San Juan, Puerto Rico.
- Wilkins, D., Laycock, J., Valdez, A., Crouch, D., and Rollins, D. "Quantitative determination of buprenorphine and norbuprenorphine in hair by LC/MS/MS". Abstract presented at the College on Problems of Drug Dependence Annual Meeting, June 1996, San Juan, Puerto Rico.
- Nagasawa, P., Wilkins, D., Valdez, A., and Rollins, D. "Quantitative determination of

- methadone, EMDP and EDDP in human and rat hair by GC/MS". Abstract presented at the College on Problems of Drug Dependence Annual Meeting, June 1996, San Juan, Puerto Rico.
- Slawson, M., Chamberlain, M., Wilkins, D., and Rollins, D. "A comparison between phenobarbital and phencyclidine binding in pigmented hair". Abstract presented at the Society of Forensic Toxicologists Annual Meeting, October 1996, Denver, CO.
- Valdez, A., Wilkins, D., Gygi, S., and Rollins, D. "Quantitative determination of LAAM and its major metabolites dinorLAAM and norLAAM in hair by PCI-GC/MS. Abstract presented at the Society of Forensic Toxicologists Annual Meeting, October 1996, Denver, CO.
- Wilkins, D., Nagasawa, P., Valdez, A., and Rollins, D. "Dose-proportional distribution of drugs for the treatment of substance abuse into rat hair". Abstract presented at the Society of Forensic Toxicologists Annual Meeting, October 1997, SLC, UT.
- Hold, K., Wilkins, D., Hill, M., Joseph, R., Cone, E., and Rollins, D. "Simultaneous quantitation of cocaine, opiates and metabolites in human hair by GC/MS". Abstract presented at the Society of Forensic Toxicologists Annual Meeting, October 1997, SLC, UT.
- Valdez, A., Wilkins, D., Mizuno, A., Laycock, J., Cone, E., and Rollins, D. "Buprenorphine and norbuprenorphine in human hair after multiple doses: A retrospective study". Abstract presented at the Society of Forensic Toxicologists Annual Meeting, October 1997, SLC, UT.
- Hubbard, D., Wilkins, D., and Rollins, D. "The preferential incorporation of cocaine and its metabolites into pigmented hair: A dose-response study". Abstract presented at the Society of Forensic Toxicologists Annual Meeting, October 1997, SLC, UT.
- Slawson, M., Wilkins, D., and Rollins, D. "The incorporation of phencyclidine into hair: A comparison with eumelanin and pheomelanin concentrations". Abstract presented at the Society of Forensic Toxicologists Annual Meeting, October 1997, SLC, UT.
- Nagasawa, P., Krueger, G., Slawson, M., Wilkins, D. and Rollins, D. "A mouse model for studying drug incorporation into human hair". Abstract presented at the Society of Forensic Toxicologists Annual Meeting, October 1997, SLC, UT.
- Joseph, R., Cone, E., Hold, K., Wilkins, D. and Rollins, D. "Designing and integrating studies to evaluate drug disposition in hair". Abstract presented at the Society of Forensic Toxicologists Annual Meeting, October 1997, SLC, UT.
- Slawson, M., Wilkins, D., and Rollins, D. "The role of hair color in the incorporation of drugs of abuse into hair". Abstract presented at the College on Problems of Drug Dependence Annual Meeting, June 1998, Scottsdale, AZ.
- Hold, K., Wilkins, D., Crouch, D., Cheever, M., Savitz, D., Thorp, D., and Rollins, D. "Hair analysis to monitor substance abuse during pregnancy". Abstract presented at the College on Problems of Drug Dependence Annual Meeting, June 1998, Scottsdale, AZ.
- Valdez, A., Wilkins, D., Slawson, M., Sison, C., Huber, A., Ling, W., and Rollins, D. "Buprenorphine and norbuprenorphine in human hair of substance abuse treatment subjects". Abstract presented at the College on Problems of Drug Dependence Annual Meeting, June 1998, Scottsdale, AZ.
- Wilkins, D., Slawson, M., Valdez, A., Sison, C., Huber, A., Ling, W., and Rollins, D. "Buprenorphine, norbuprenorphine and melanin in human hair". Abstract presented at the Society of Forensic Toxicologists Annual Meeting, October 1998, Albuquerque,

NM.

- Augsburger, M., Wilkins, D., Slawson, M., O'Neal, C., Mizuno, A., Borges, C. and Rollins, D. "Effect of pigmentation on the incorporation of codeine into human hair". Abstract presented to the College on Problems of Drug Dependence Annual Meeting, June 2000, San Jan, Puerto, Rico.
- Wilkins, D., Augsburger, M., Slawson, M. and Rollins, D. "Quantitative determination of codeine in human hair by high performance liquid chromatography-mass spectrometry". Abstract presented at the College on Problems of Drug Dependence Annual Meeting, June 2000, San Jan, Puerto, Rico.
- Paulsen, R., Wilkins, D., Slawson, M., Shaw, K. and Rollins, D. "Quantitation of cocaine and metabolites in hair via API-ES LC/MSD." Abstract presented at the Society of Forensic Toxicologists Annual Meeting, October 2000, Milwaukee, WI.
- Borges, C., Wilkins, D. and Rollins, D. "Relating melanin degradation products to actual melanin content" Application to human hair". Toxicologic Science, 54: S202, 2000.
- Rollins, D., Wilkins, D., Mizuno, A., Slawson, M. and Borges, C. "The role of pigmentation in the distribution of drugs of abuse in human hair". Clinical Pharmacology and Therapeutics, 67:113, 2000.
- Borges, C., Martin, S., Meyer, L., Wilkins, D., and Rollins, D. "Influx and efflux of amphetamine and N-acetylamphetamine in keratinocytes, pigmented melanocytes, and non-pigmented melanocytes". Abstract presented at the Society of Forensic Toxicologists Annual Meeting, October 2001, New Orleans, LA.
- Borges, C., Martin, S., Meyer, L., Rollins, D., and Wilkins, D. "Influx and efflux of cocaine in keratinocytes, pigmented melanocytes and non-pigmented melanocytes". Abstract presented at the Society of Forensic Toxicologists Annual Meeting, October 2001, New Orleans, LA.
- Smeal, S. and Wilkins, D. "Hair exposed to pyrolysis products of cocaine". Abstract presented at the Society of Forensic Toxicologists Annual Meeting, October 2001, New Orleans, LA.
- Martin, S., Borges, C., Rollins, D., and Wilkins, D. "Influx and efflux of drugs in pigmented and non-pigmented melanocytes". Abstract presented at the International Association of Forensic Toxicologists Annual Meeting, August 2002, Paris.
- Wilkins, D., Charles, B., Day, J. and Rollins, D. "Opiate recidivism in a drug treatment program: Comparison of hair and urine data". Abstract presented at the Society of Forensic Toxicologists Annual Meeting, October 2002, Detroit, MI.

#### BOOK CHAPTER

Crouch, D. and Wilkins, D. "The Certified Laboratory". Chapter in: Toxicology Training Manual, California Association of Toxicologists, 1994.

#### INVITED PRESENTATIONS/SYMPOSIA

- "Drug testing in hair: Analytical challenges and issues of interpretation". Wilkins, D. Course Instructor, Research Triangle Institute (Research Triangle Park, NC). April 29, 2000.
- "Drug testing in oral fluids". Wilkins, D. Course Instructor, Research Triangle Institute (Research Triangle Park, NC). April 29, 2000.
- "Hair analysis for drugs in substance abuse treatment programs". Wilkins, D. American Society

- for Clinical Pharmacology and Therapeutics (Los Angeles, CA). March 16, 2000
- "Alternative matrix analysis for opiates: Hair". Wilkins, D. American Academy of Forensic Sciences Annual Meeting (Reno, NV). February 22, 2000.
- "Pharmacokinetic studies of the disposition of drugs of abuse into human hair". Wilkins, D. Society of Forensic Toxicology Workshop (Sacramento, CA). February 4, 2000.
- "Chemical Ionization of Drugs for the Treatment of Substance Abuse". Wilkins, D. Society of Forensic Toxicology Workshop (Albuquerque, NM). October 5th, 1998.
- "P450 Isozymes in Specific Pathways". Wilkins, D. Society of Forensic Toxicology Workshop (Denver, CO). October 15th, 1996.
- "Novel Approaches for Studying Disposition of Drugs of Abuse in Hair". Wilkins, D. California Association of Toxicologists Workshop (Culver City, CA). May 6, 1995.
- "Quality Control Practices in Drug Testing Laboratories". Wilkins, D. Laboratory Aspects of Drug Testing in Biological Specimens Workshop (Salt Lake City). March 10, 1994.
- "Hair Analysis". Wilkins, D. Laboratory Aspects of Drug Testing in Biological Specimens Workshop (Salt Lake City). March 11, 1994.
- "Quality Control Practices for NIDA Drug Testing Laboratories". Wilkins, D. Laboratory Aspects of Forensic Urine Drug Testing Workshop (Salt Lake City). March 11-18, 1992.
- "The Benzodiazepines: Analytical Techniques". Wilkins, D., Moody, D., Andrenyak, D. and Rollins, D. American Academy of Forensic Sciences Annual Meeting (New Orleans). February 19, 1992.
- "Psychosocial Aspects of Athlete Drug Use: A Historical Perspective". Wilkins, D. California Association of Toxicologists Steroid Workshop (Lake Tahoe). August 9, 1991.
- "Research Opportunities in Forensic Analytical Toxicology". Wilkins, D. Utah Society of Medical Technology Annual Spring Seminar (Salt Lake City). March 8, 1991.
- "Establishing A Model for the Study of Growth Hormone Abuse in Two Populations of Well-Conditioned Male Athletes". Wilkins, D. California Association of Toxicologists Quarterly Meeting (Sacramento). August 4, 1990.